

## **ADAPTIVE FILTER MODELING FOR VECTOR CONTROLLED INDUCTION MACHINE FOR ROBUST INVERTER DESIGN**

**SRINIVASA RAO JALLURI AND B.V. SANKER RAM**

### **Abstract**

A programmable-cascaded three-stage low-pass filter is proposed to estimate the flux vector. These LPF gives idle integration at any frequencies but has inherent time delay for flux buildup at transient condition, which is dominant at very low frequencies. These transients develop a torque jerk to induction motor during the stator flux buildup by three stages LPF. This paper work implements a programmable cascade three-stage low pass filter method for the flux vector estimation for a 3-hp induction motor drive. The paper also realizes a feed forward control strategy of the stator flux to eliminate the torque jerk during transition from the standstill mode to the Vector control mode for the Induction motor drive.

-----  
**Keywords:** Adaptive filter, vector control, Induction Machine, filtration programme.